

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN THE APPLICATION OF:

LAIMUTE R. SVARCAS, WILLIAM K.S. CLEVELAND, AND JOHN L. PETRIC

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CUSTOMER NUMBER: 26645

SERIAL No.: 10/511,247

EXAMINER: V. VASISTH

FILED: OCTOBER 13, 2004

GROUP ART UNIT: 1797

TITLE: LUBRICANT COMPOSITION SUITABLE FOR DIRECT FUEL INJECTED,
CRANKCASE-SCAVENGED TWO-STROKE ENGINES

Wickliffe, Ohio

Hon. Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

Sir:

DECLARATION UNDER 37 C.F.R. §1.132

I, Patrick Mosier, declare as follows:

I received a bachelor's degree in the field of chemistry in 1989 from Purdue University, a master's degree in the field of chemistry in 1991 from the University of Michigan, and a Ph.D. degree in the field of inorganic chemistry in 1995 from the University of Michigan.

I have been employed by The Lubrizol Corporation since 2000. Since that time I have been responsible for development of new chemicals and products to improve the performance of engine oil lubricants. I spent three years as a laboratory chemist investigating new polymeric viscosity modifiers, polymeric dispersants, antioxidants, and anti-wear agents. Subsequent to that, I have spent much of the last six years working as a technology manager in the area of Engine Oils, during which time I have been responsible for development of new components for anti-wear as well as base oil chemistry for Engine Additives. I have general knowledge in the areas of chemical synthesis as well as special knowledge in the area of lubricant additive chemistry.

I am familiar with the invention claimed in the above-mentioned case and with the references which were used in the rejection thereof.

In order to illustrate the improvement in performance of the compositions of the above invention, the following experiments were performed by me: I ordered the

preparation and testing of the indicted materials. For simplicity, I do not repeat the examples that were presented in my earlier Declarations. Each of the present samples was subjected to the MHT TEOST test which I described in my Declaration of May 12, 2009. The results are presented below.

Each of the materials in the examples, below, are the same as those used in my previous declarations. As before, each of the materials is presented here on an oil-free, active chemical basis. That is, the Mannich dispersant employed was supplied containing about 12% diluent oil; this amount has been subtracted from the amount of Mannich dispersant listed in the table, so that the amount reflects the active chemical. (This small amount of diluent oil has not been added into the listed amount for the mineral oil, component (a)). Similarly, the amino phenol material as supplied contained about 40% mineral oil. This has been treated in the same way.

Example	K	M	N
Material, %			
Mineral oil (a)	89.2	89.2	87.1
Condensation prod (b-1)	2.8	6	6
Mannich dispersant (b-2)	5.28	2.64	5.28
Total dispersants	8.8	8.8	12
Amine AO (d)	2	2	0.9
%N	0.32	0.49	0.48
TEOST (mg total)	31.6	27.1	12.9

The results of the testing show that at concentrations of the condensation product at least as low as 2.8%, good TEOST deposit performance persists. Likewise, good performance is obtained at concentrations of the Mannich dispersant at least as low as 2.8% and at concentrations of the amine antioxidant at 0.9%.

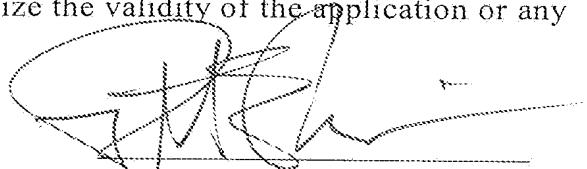
In my previous Declaration I noted that the results from what was there designated Ex1 gave the very good result of 7.3 mg in the TEOST. While such low values are indeed exceptionally good, it is my opinion that results of 32 mg and below, as in the data presented above, do represent a significant improvement over values of 36 and above reported for materials in my previous declaration outside the scope of the present invention.

For purposes of completeness, I present below the values for % nitrogen for certain of the formulations for which this value was missing from my previous Declaration:

Current designation	B	C	D	F	G	H	I	J	L	P
Previous ref #:	C2	C3	C8	C10	C11	C4	C5	C6	C9	Ex2
%N	0.09	0.05	0.14	0.30	0.41	0.09	0.35	0.42	0.55	0.65

I also wish to correct one value that was incorrectly reported in my previous Declaration as a result of a transcription error. In Example C-10, the amount of the condensation product (b-1) should be 3% rather than 2%. None of my conclusions are changed.

I further declare that all statements herein made of my own knowledge are true and all statements herein made on information and belief are believed to be true. I understand that willful false statements and the like are punishable by fine or imprisonment or both (18 U.S.C. 1001) and may jeopardize the validity of the application or any patent issuing thereon.



Patrick Mosier

06/02/2010 (date)